CLAIMS:

1. A woodworking machine comprising:

a cutting tool for cutting workpieces;

at least one motor configured to drive the cutting tool;

a detection system configured to detect a dangerous condition associated with the cutting tool;

a brake mechanism controllable to stop the cutting tool if the dangerous condition is detected; and

a control system configured to determine the operability of the brake mechanism and to disable the at least one motor if the brake mechanism is inoperable.

2. The machine of claim 1, where the brake mechanism includes a capacitor, and where the control system is configured to determine the capacitance of the capacitor.

3. The machine of claim 1, where the brake mechanism includes a capacitor adapted to store electrical charge, and where the control system is configured to determine the electrical charge stored on the capacitor.

4. The machine of claim 1, further comprising a spacing detection system associated with the brake mechanism and adapted to detect whether the spacing between the cutting tool and a selected portion of the brake mechanism is within a predetermined range, and where the control system is configured to disable the at least one motor if the spacing detected by the spacing detection system is out of the predetermined range.

5. The machine of claim 1, where the brake mechanism includes at least one replaceable single-use component, and where the control system is configured to detect whether the single-use component has been used, and to disable the at least one motor until the single-use component has been replaced.

6. The machine of claim 5, where the brake mechanism includes a fusible member.

7. The machine of claim 1, further comprising a user interface controllable by the control system to indicate whether the brake mechanism is operable.

8. The machine of claim 1, further comprising a user-actuatable override switch coupled to the control system, and where the control system is configured not to disable the at least one motor if the override switch is actuated.

9. The machine of claim 8, where the control system is configured to at least temporarily disable the brake mechanism if the override switch is actuated.

10. The machine of claim 1, where the control system is configured to determine if the cutting tool is moving, and configured not to trigger the brake mechanism if the dangerous condition is detected when the cutting tool is not moving.

11. The machine of claim 1, where the brake mechanism is adapted to be electrically coupled to the control system, and where the control system is configured to disable the at least one motor if the brake mechanism is not coupled to the control system.

12. A woodworking machine comprising:

a cutting tool for cutting workpieces;

at least one motor configured to drive the cutting tool;

a detection system configured to detect a dangerous condition associated with the cutting tool;

a brake mechanism having at least one replaceable single-use component, and controllable to stop the cutting tool if the dangerous condition is detected; and

a control system configured to detect whether the single-use component has been used, and to disable the at least one motor until the single-use component has been replaced.

13. The machine of claim 12, where the at least one replaceable single-use component includes a fusible member.

14. The machine of claim 13, where the control system is configured to detect whether the fusible member has been melted.

15. The machine of claim 13, where the control system is configured to test the electrical continuity of the fusible member.

16. The machine of claim 13, where the brake mechanism includes a capacitor adapted to store electrical charge, and where the control system is configured to determine the capacitance of the capacitor.

17. The machine of claim 16, where the control system is configured to measure the capacitance of the capacitor through the fusible member.

18. The machine of claim 13, where the brake mechanism includes a capacitor adapted to store electrical charge, and where the control system is configured to determine the electrical charge stored on the capacitor.

19. The machine of claim 18, where the control system is configured to measure the electrical charge stored on the capacitor through the fusible member.

20. A woodworking machine comprising:

a cutting tool for cutting workpieces;

a detection system adapted to detect contact between a user and the cutting tool;

a brake system adapted to engage and stop the cutting tool when the detection system detects contact between the user and the cutting tool; and

a control system adapted to monitor the detection system and control actuation of the brake system;

where the control system is adapted to test at least a portion of the brake system to verify that the portion of the brake system is operational.

21. The machine of claim 20, further including a motor controllable by the control system to drive the cutting tool, and where the control system is adapted to test the portion of the brake system prior to actuation of the motor, and where the control system is adapted not to actuate the motor unless the portion of the brake system is operational.

22. The machine of claim 21, where the control system is adapted to test the portion of the brake system while the motor is running, and to shut off the motor if the control system determines the portion of the brake system is not operational while the motor is running.

23. The machine of claim 21, where the control system is adapted to test at least a portion of the detection system prior to actuation of the motor to verify that the portion of the detection system is operational, and where the control system is adapted not to actuate the motor unless the portion of the detection system is operational.

24. The machine of claim 23, where the control system is adapted to test the portion of the detection system while the motor is running, and to shut off the motor if the control system determines the portion of the detection system is not operational while the motor is running.

25. A method of controlling a saw, where the saw includes a blade driven by a motor, a detection system adapted to detect a dangerous condition between a person and the blade, and a reaction system associated with the detection system to cause a predetermined action to take place upon detection of the dangerous condition, the method comprising:

checking to see whether the detection system is functioning;

checking to see whether the reaction system is functioning; and

powering the motor to drive the blade if the detection and reaction systems are functioning.

26. The method of claim 25, further comprising checking to see whether the detection system is functioning while the motor is running, and shutting the motor off if the detection system is not functioning while the motor is running.

27. The method of claim 25, further comprising checking to see whether the reaction system is functioning while the motor is running, and shutting the motor off if the reaction system is not functioning while the motor is running.

28. A woodworking machine comprising:

a support structure;

a cutting tool adapted to move to cut a workpiece, where the cutting tool is supported by the support structure;

at least one motor adapted to drive the cutting tool;

a detection system adapted to detect a dangerous condition between the cutting tool and a person;

a reaction system adapted to perform a specified action upon detection of the dangerous condition; and

a self-test system adapted to test the operability of at least a portion of the reaction system and to disable the at least one motor if the tested portion of the reaction system is inoperable.

29. The woodworking machine of claim 28, where the self-test system tests the operability of the reaction system while the cutting tool is moving.